

# LAB Logbook

## Lab 1

### Lab Logbook Requirement:

#### 1) Create a vector using *np.arange*.

Determine the number of the vector elements using the following method: Take the last two digits from your SID. It should be from 00 to 99. If this number is 10 or more, it becomes the required number of the vector elements. If it is less than 10, add 100 to your number.

For example, if your SID is 2287467, and the last two digits are 67, which is greater than 10. The required number is 67. If your SID is 2287407, and the last two digits are 07, which is less than 10. The required number is 107.

Then,

2. Change matrix a to 2-d array with 1 row. Print the array. You should have the two sets of brackets for a 2-d array with one row.
3. Save it in another array. Print the array.
4. Check the shape attribute value.
5. Add the code and result to your Lab Logbook

**NOTE: DON'T FORGET TO SAVE AND BACK UP YOUR COMPLETED JUPYTER NOTEBOOK AND LAB LOGBOOK ON GITHUB OR ONEDRIVE.**

```
In [69]: SID = 2285050
```

```
In [72]: number_of_vector_elements = 50
vector = np.arange(number_of_vector_elements)
print("Vector: ", vector)
```

```
Vector: [ 0  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47
48 49]
```

```
In [73]: _2d_array = vector.reshape(1, -1)
print("2D array with one row: ", _2d_array)
```

```
2D array with one row: [[ 0  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47
48 49]]
```

```
In [74]: another_array = _2d_array.copy()
print("Another array: ", another_array)
```

```
Another array: [[ 0  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47
48 49]]
```

```
In [75]: shape_value = another_array.shape
print("Shape: ", shape_value)
```

```
Shape: (1, 50)
```

```
In [ ]:
```

# Lab 2

Week 3-Pandas-and-Seaborn\_ML\_in-Finance\_Final.ipynb

Users | alfredbidokwu | Downloads | Week 3-Pandas-and-Seaborn\_ML\_in-Finance\_Final.ipynb | ML Lab Logbook Requirement: | empty cell

Code | Markdown | Run All | Restart | Clear All Outputs | Variables | Outline

NOTE: DON'T FORGET TO SAVE AND BACK UP YOUR COMPLETED JUPYTER NOTEBOOK AND LAB LOGBOOK ON GITHUB OR ONEDRIVE.

```
# Extracts a subset of data to the last digit of year 2000.
idx = 20000

# Select the last digit of year (0 to 9) and subset the number of the last digit of year 2000
last_digit_idx = 10

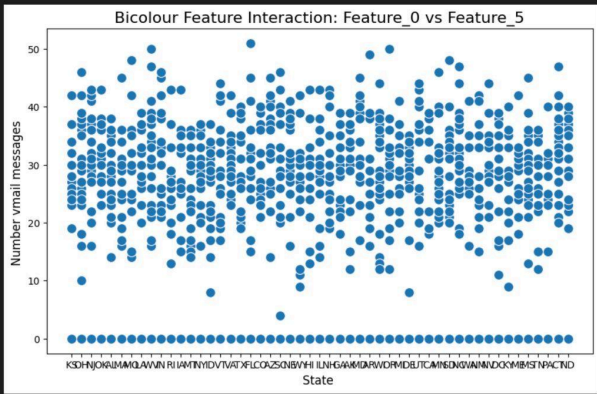
# Create a new DataFrame with the last digit of year 2000
data = data[data['year'] % 10 == last_digit_idx]
```

# Labels and Title

```
plt.title("Bicolour Feature Interaction: Feature_0 vs Feature_5", fontsize=16)
plt.xlabel("State", fontsize=12)
plt.ylabel("Number vmail messages", fontsize=12)
plt.show()
```

Python

180 | 0.0s



# Lab 3

Week-3-Pandas-and-Seaborn\_ML\_in-Finance\_Final-2.ipynb

Users | alfredbidokwu | Downloads | Week-3-Pandas-and-Seaborn\_ML\_in-Finance\_Final-2.ipynb | ML Lab Logbook Requirement: | empty cell

Code | Markdown | Run All | Restart | Clear All Outputs | Variables | Outline

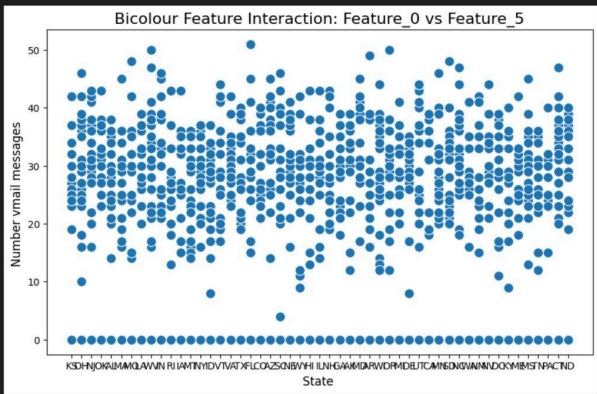
NOTE: DON'T FORGET TO SAVE AND BACK UP YOUR COMPLETED JUPYTER NOTEBOOK AND LAB LOGBOOK ON GITHUB OR ONEDRIVE.

```
SID = 2285950
LastDigit = 0 #State
SecondToTheLastDigit = 5 #Number vmail messages
plt.figure(figsize=(18, 6))
sns.scatterplot(data=data, x='State', y='Number vmail messages', palette='coolwarm', s=100)

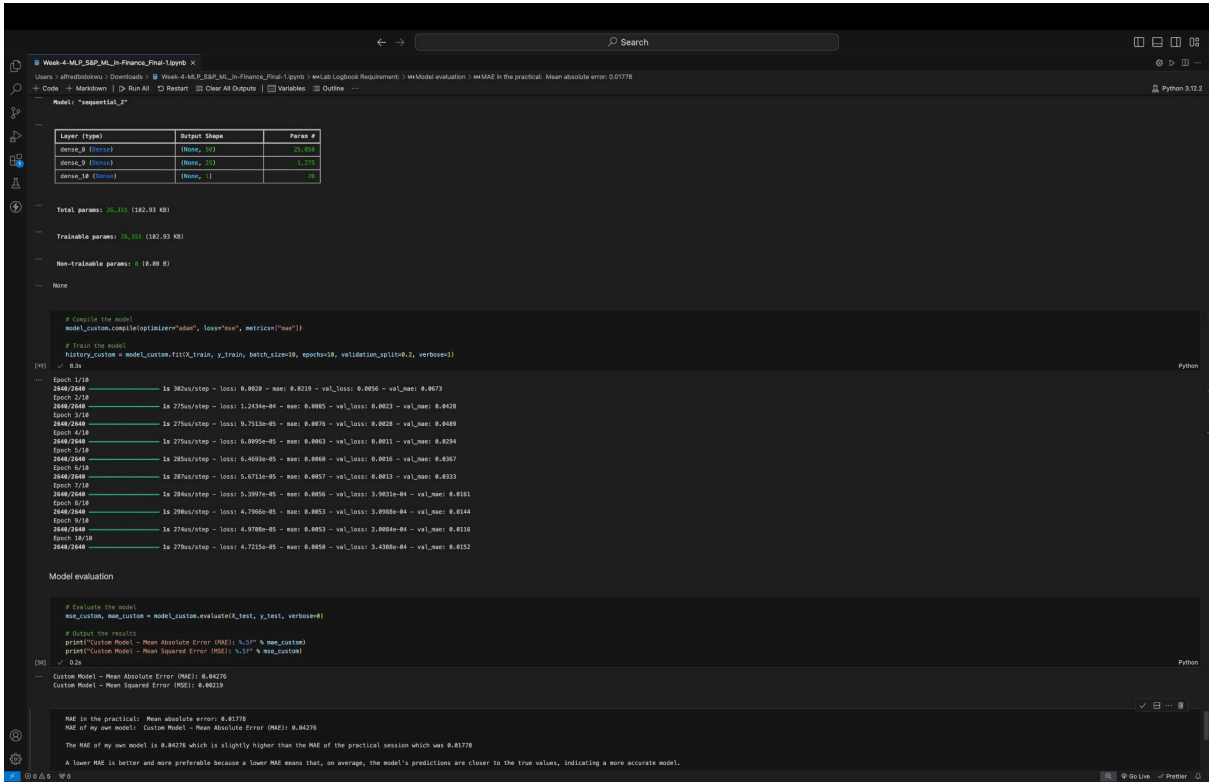
# Labels and Title
plt.title("Bicolour Feature Interaction: Feature_0 vs Feature_5", fontsize=16)
plt.xlabel("State", fontsize=12)
plt.ylabel("Number vmail messages", fontsize=12)
plt.show()
```

Python

180 | 0.0s



# Lab 4



# Lab 5

# Lab 6

# Lab 7

# Lab 8

# Lab 9

Lab 10

Lab 11

Lab 12